Does Bancassurance Add Value to Banks? - Evidence from Mergers and Acquisitions between European Banks and Insurance Companies

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Abstract

This paper is the first comprehensive study of the risk and wealth effects of mergers and acquisitions between banks and insurance companies. The empirical results indicate that while acquirers' total risk remains relatively constant, their systematic risk falls relative to their home banking indices. Acquiring banks experience negative and statistically significant short term abnormal returns. In the case of cross-border deals as compared to domestic deals, empirical results show a reduction in risk without a loss of wealth for the bidder banks. We also observe a reduction in beta risk associated with a negative abnormal return for the home banking index. The empirical results also show that in the long run, there is no abnormal return associated with mergers and acquisitions between banks and insurance companies. The empirical results demonstrate that due to high leverage in banks, there is a transfer of wealth from stockholders to debt holders due to a reduction in beta risk. Finally, one can also note that greater synergy is generated, when the deal size relative to the bidder's market value is greater.

Keywords: mergers and acquisitions; insurance; risk change; abnormal returns

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1. Introduction

The Uruguay round of trade negotiations paved the way for deregulation of the financial services industry in most parts of the world. Both banking and insurance companies have developed and consolidated their operation over the last few years. One of the consequences of these deregulations has been the emergence of bancassurance[1] services. As deregulation of the financial services industry intensified, a number of Asian countries such as China, India, Japan and Singapore, amongst others, have allowed bancassurance to be practised. Similarly, in a number of European countries, one can note a significant portion of life insurance business is handled by banks. The emergence of bancassurance contributed to overall efficiency, an increase in economies of scope and an increase in productivity of both banks and insurance companies in some of the European countries. Similarly, it is reported by Swiss Re, 2002 that bancassurance has led to lower or stable distribution cost compared with career agents in Asia.

While consumers could also pay lower insurance premium rates and receive better financial services products, there are also some potential negative factors associated with bancassurance. Some of these pitfalls, as stated by Swiss Re are the substitution of bank deposit products and the life insurance saving component, reputation risk from the insurance operations of better known banks etc. Furthermore, one cannot underestimate the challenges related to regulatory arbitrage in capital requirement.

Bancassurance services have evolved in different parts of the world according to the nature of deregulation and other national or regional factors in place. For instance, the US Financial Services Modernisation Act 1999 contributed to the expansion of bancassurance in the US, as it provides opportunities for financial holding companies to offer a wide range of financial products and activities such as underwriting and selling insurance products.

Genetay and Molyneux (1998)'s work is a comprehensive review of bancassurance in Europe including its historical roots. It is noteworthy that in recent times, bancassurance has increased in Europe as European based insurance companies were allowed to operate throughout Europe with one single license based on the EU's single insurance market directive since July 1994.

There are no comprehensive empirical studies of Mergers and Acquisitions between banks and insurance companies, with a particular focus on European countries. The purpose of this study is to empirically study the effects of mergers and acquisitions between banks and insurance companies in Europe. While there is an unpublished study of mainly the US mergers and acquisitions by Fields et al (2004), this study is the first comprehensive study of M & A in bancassurance in Europe which could provide new insight into the dynamic relationship between banks and insurance companies and the synergy that could be generated, as the financial services industry evolves in the 21st century.

More specifically, the purpose of this study is to investigate the impact of M&As between European banks and insurance companies on stock returns of these European banks. This study will provide relevant information about the effects of the new regulations on the outcome of M&A between banks and insurance companies. From the banking and insurance industry point of view, such a study is important as it could shed some light on the effects of M&A between banks and insurance companies on the performance of these financial institutions.

Using the Thomson Financial Securities Data Merger and Acquisition Database list of 213 deals between 1986 and 2004, this study finds that while acquirers' total risk remains relatively constant, their systematic risk falls relative to their home banking indices. Acquiring banks experience negative and statistically significant short term abnormal returns. In the case of cross-border deals as compared to domestic deals,

[1] Bancassurance is defined "as a strategy adopted by banks or insurance companies aiming to operate in the financial services market in a more or less integrated manner" and "is the distribution of insurance products by banks." (Swiss Re 2002, page 5).

empirical results show a reduction in risk without a loss of wealth for the bidder banks. We also observe a reduction in beta risk associated with a negative abnormal return for the home banking index.

The remainder of this paper is organized as follows. Section 2 discusses aspects of financial services with a focus on M&A in banking and insurance, section 3 discusses the methodology used to measure Bancassurance acquisition risk and abnormal returns. Section 4 discusses the data used. Section 5 reports the empirical results, and Section 6 concludes.

2. Aspects of financial services including Mergers and Acquisitions in financial services

The purpose of this section is simply to highlight some of the relevant past studies in the area of financial services mainly with a focus on M & A in banking and/or insurance as a way of setting the scene for the methodology that we are going to use in our study and to ensure that the readers can better appreciate the empirical findings of this study, as we compare them with the most relevant ones in this area.

There have been a number of studies dealing with the determinants of international banking services such as Moshirian (2001, 2004) in which the nature of international financial services were analysed and those key factors contributing to the expansion of international banking business were identified. In another study Moshirian et al (2003) analysed those supply factors that could contribute to the expansion of intra industry trade in insurance products for US insurance companies. Similarly, in a recent study Moshirian et al (2005) analysed the intra-industry trade in banking services that could contribute to the expansion of product differentiation in banking services. However, while these studies shed some light on the international operations of banks and insurance companies, they did not analyse the effects of M&A between banks and insurance companies.

One of the most relevant studies related to M&A for bancassurance is a study by Cybo-Ottone and Murgia (2000) who analysed the stock market valuation of merger and acquisitions in the European banking industry using 54 large banks over the period 1988 to 1997, although they only found 10 banking and insurance mergers. Similarly, the study by Amihud et al (2002) examines the consequences of cross border bank mergers and returns of acquiring banks. Their sample consists of 214 mergers over the period 1985-1998.

In the past data has been a major drawback for the empirical studies of mergers and acquisitions between banks and insurance companies. The exception is the recent unpublished study by Fields et al (2004) where they mainly used data from the US to analyse the wealth effects of 136 banks and insurance mergers among US and non-US companies over the period 1997 and 2002 without including the European mergers as a separate category. Furthermore, in this study, the bidders could be either banks or insurance companies. They find positive abnormal returns among both bidders and targets announcing purchases of publicly traded targets.

Besides the study by Fields et al (2004), one can only find some studies that conducted simulated mergers between banks and non-banking financial firms such as Boyd and Graham (1998), Boyd, Graham and Hewitt (1993) and Genetay and Molyneux (1998). However, as it is argued in this literature, one should note that the simulated mergers may not capture some of the factors such as structural changes in financial services and potential synergies associated with the actual realisation of a merger.

The empirical results for studies that dealt with both banks and insurance companies are not consistent with each other. For instance, Carow (2001a) found that the Citicorp-Travelers Group merger increased stock price in both life insurance companies and large banks in the US. However, Carow (2001b) found that the consequences of allowing banks to sell insurance products in the US led to a reduction in insurance company stock prices. In a recent study on bancassurance, Fields, Fraser and Kolari (2004) found that bancassurance deals lead to a win-win situation for both

bidder-target firms in the US. At the same time, a banking study by Cybo-Ottone and Murgia (2000) reported that European M&A lead to a positive and significant increase in stock market value for the average merger at the time of the deal announcement.

Some of the past empirical findings related to bank mergers are a useful guide for studying mergers between banks and insurance companies in this study. For instance, James and Weir (1987), Houston and Ryngaert 1994 and DeLong (2001) who analysed the effects of the stock price performance of bidder and target firms reported that at a five day window around announcement, the value of the bidder decreased about 2 percent. In different sets of studies by Dodd, 1980 and Asquith, 1983, with a focus on risk adjusted studies on mergers, one can note that the stockholders of bidding firms with different gains and loses from the announcement of a merger bid.

Given the above studies, particularly the studies by Cybo-Ottone and Murgia (2000), Amihud et al (2002) and Fields, Fraser and Kolari (2004) the next section explains the methodology and the model that we use to measure the effects of M&A between banks and insurance companies.

3. Methodology

Fields et al. (2004) use a comparison period approach to calculate return and risk effects. The problem with this approach is the difficulty of selecting a 'normal' period, because abnormal share price movement can happen before the corporate news release due to leakage of information. They also use revenue, total asset and ROA as determinant parameters in their multivariate regression model. The problem with those accounting data is that they are normally reported annually or semi-annually and do not tend to reflect the up-to-date firm information. As indicated above, Amihud et al (2002) analysed the consequences of cross border bank mergers. Their study's method, which focuses on M & A in banking avoids the above two problems. Thus, the methodology and approach used and reported below in this study are adapted from Amihud et al (2002).

In this study, in relation to the world market index, the acquirer's home country market index and the acquirer's home country banking index, we analyse the changes in the acquiring bank's risk before and after the bancassurance acquisition is completed. Furthermore, this study analyses the value (abnormal return) effect of these acquisitions. To analyse the risk, similar to the study by Amihud et al (2002), this study compares the acquirer's risk one year prior to the acquisitions announcement with the acquirer's risk one year after the acquisition becomes effective. Thus, as for total relative risk, pre-merger risk is evaluated over the period of (-260, -11) before the date of the merger announcement and the post-merger risk over the period (+11, +260) after the merger's completion date. The world banking index is converted to the currency of the acquirer's home country in order to be consistent with the stock return of the acquirer, and then returns are calculated based on the converted world banking index.

3.1 Risk

Similar to Amihud et al (2002), we measure the change in risk profile of the acquiring firm arising from the acquisition through the change in total relative risk (ΔTRR) and the change in systematic risk ($\Delta\beta$).

3.1.1. Total relative risk

Total relative risk (TRR) is measured by the ratio of the variance of the firm's returns to the variance of returns on three indices: the world market index, the home market index and the home banking index.

3.1.2. Systematic risk

Systematic risk is measure by the beta coefficient of the acquirer's stock return relative to the returns on the three indices: the world market index, the home market index after controlling for the effect of the world market index, and the home banking index after controlling for the effect of both the world market index and the home market index.

3.2. Abnormal returns

Abnormal returns are measured relative to the world market index and the home market index and the home banking index. We consider a 20-day period event window surrounding the announcement of the merger, from 10 days before the merger announcement to 10 days after (days -10 to +10). The event window of 20 days captures possible leakage of information before the merger is announced. We then analyse investor reaction to changes in total risk as well as to changes in systematic risk. After the deal is completed, the long-term performance is also analysed by estimating the cumulative abnormal return during the period between the 11^{th} and the 260^{th} day after the deal becomes effective.

4. Data

The first recorded deal of a European bank undertaking ownership of an insurance company started in May 1983, based on the Thomson Financial Securities Data base. This kind of deal has been increasing during the last two decades. There are only two deals reported on Thomson Financial Securities Database in 1983, and twenty in 2004. We examine mergers during 1980 and 2004 where the acquirer is a bank located in Europe and the target is an insurance company also located in Europe with the exception of two non-European insurers: one is in Morocco and the other is in Hong Kong. After the acquisition, the acquirer owns more than 20% of the target. The Thomson Financial Securities Data Merger and Acquisition Database list 213 such deals between 1983 and 2004. In order to eliminate noise caused by multiple mergers, as argued by Houston et al (2001), "we restrict the sample of analysed mergers to banks with limited acquisition activity around" one year. One drawback of this solution is the possibility of selection bias. We exclude the deals in which the acquirers announce more than one deal within a year. Similar to the study by Amihud et al (2002), this study considers those acquisitions where the acquirer's stock is actively traded and daily stock return data and other relevant data are available.

The data source is Datastream and there are 42 mergers in our final sample.

One can see the national identities of acquirers and targets from Table 1, Panel A. (source: Thomson Financial Securities Data). Although, one could observe that banks in the UK and Italy are active in acquiring, there is no bank acquirer in countries such as Bulgaria, Hungary, Morocco and Spain**.** Larger or more financially established countries would have more acquirers. The largest number of acquirers is in the UK while UK and Italy have larger numbers of targets as well.

As can be seen, the number of mergers in each year in our sample are reported in Table 1, Panel B. The first deal we can find is in 1986, and the bancassurance mergers activities are most active in years 1999 and 2000 in Europe.

<Insert Table 1 here>

Most of the targets were not listed on exchanges and we can only find share market information for 3 of them. Due to the lack of share data for targets, we focus on the risk effects and wealth effects for the bank acquirers.

5. Empirical results

5.1 Risk effect

Similar to Amihud et al (2002), this paper measures the change in the acquiring bank's risk profile through the change in total relative risk (ΔTRR) and the change in systematic risk ($\Delta\beta$). The methodology and approach are adapted from Amihud et al (2002).

The first risk, total relative risk (TRR), is measured by the ratio of the variance of the bank's returns to the variance of the returns on three indices: the world market index, the home market index, and the home banking index. For firm j and index k, TRR can be written as

$$TRR_{j,k} = \frac{Var(R_j)}{Var(RIndex_k)}, \quad (1)$$

R_j is the daily return on acquirer j and the $RIndex_k$ is the return on the index k, where k = world market, home market and home banking. Pre-merger risk is evaluated over the period (-260, -10) before the announcement date for the merger and post-merger risk over the period (+10, +260) after the effective date of the merger. We then calculate the change in the total relative risk, $\Delta TRR_{j,k}$,

$$\Delta TRR_{j,k} = TRR_{j,k}(\text{after}) - TRR_{j,k}(\text{before}) \quad (2)$$

In addition to examining the results for the entire sample, we divide the sample into sub-samples according to whether the mergers were cross borders: domestic mergers or cross-border mergers.

Table 2 shows that there is no change in total relative risk (TRR) relative to the world market index for the entire sample and sub-samples. The total relative risk (TRR) marginally decreases with respect to the home market index for the entire sample and sub-samples, but the results are insignificant. For the cross-border deals, TRR of more than 80% of the cross-border deal bidders reduced significantly at the 5% confidence level in respect to home banking index, and the magnitude of the decreases are only weakly significant. Bidders of domestic deals experience a marginal increase in TRR with respect to the home banking index. The entire sample has a non-significant increase in TRR with respect to the home banking index. Bancasurrance mergers may have a larger geographical diversification effect than those of mergers within the same industry, and the risk caused by the larger exposure to the world market outweighs the geographical diversification effect.

Our result reported in Table 2, is consistent with Amihud et al. (2002) and Fields et al. (2004) that there is no effect on the bidder's total risk.

<Insert Table 2 here>

Both industry diversification and geographic diversification would be able to reduce systematic risk. After a bank acquires an insurance company, some of its income is generated from the insurance business. It is expected that after the merger covariance between the acquirer's return and its home banking index will be lower. For the merger which involves taking over an insurance company overseas, the acquirer's return will show a weaker covariance with both its home market index and its home banking index. The second risk, systematic risk, is measured by the bank's beta coefficient based on a three-factor market model involving three indices: the world market index, the home market index and the home banking index. Based on Amihud et al (2002), the estimated model for the return of stock j on day t, $R_{j,t}$, is

$$\begin{aligned} R_{j,t} &= \alpha_j + \alpha_{1j} D_t + \beta_{\text{world},j} RI_{\text{world},t} + \gamma_{\text{world},j} RI_{\text{world},t} D_t \\ &+ \beta_{\text{home},j} RI^*_{\text{home},t} + \gamma_{\text{home},j} RI^*_{\text{home},t} D_t \\ &+ \beta_{\text{homebanking},j} RI^*_{\text{homebanking},t} + \gamma_{\text{homebanking},j} RI^*_{\text{homebanking},t} D_t + \mu_{j,t}, \end{aligned} \tag{3}$$

where $RI^*_{\text{home},t}$ is the home market index return after removing the effect of world market index, $RI^*_{\text{homebanking},t}$ is the home banking index return after removing the effect of both the world market index and the home market index. $RI^*_{\text{home},t}$ is the residual obtained by regression of home market index returns, $RI_{\text{home},t}$, on the world market index return, $RI_{\text{world},t}$. $RI^*_{\text{homebanking},t}$ is the residual obtained by regression of home banking index returns, $RI_{\text{homebanking},t}$, on the world market index return, $RI_{\text{world},t}$, and $RI^*_{\text{home},t}$. D_t is a dummy variable, $D_t = 0$ for days -260 to day -10 before the merger announcement, and $D_t = 1$ for days +10 to +260 after the consummation of the merger.

Change in systematic risk is then given by the difference of these two measures:

$$\Delta\beta_{kj} = \beta_{kj}(\text{after}) - \beta_{kj}(\text{before}) = \gamma_{kj} \tag{4}$$

Table 3 presents results of the change in systematic risk. There is no significant change in systematic risk for both the world market index and the home market index.

The systematic risk for the home banking index reduced significantly for entire sample and the two sub-samples. After cross border acquisitions, insurance business contributes income to the bidder bank therefore the share of banking income reduces, thus the bidder bank's return is expected to have a weaker covariance with the home banking index. When the insurance company return is coming from a foreign country, the covariance is further reduced. The results are meeting our expectations. The magnitude of beta reduction for cross border deals is bigger than domestic deals. Therefore, cross-border bancassurance mergers tend to create more diversification benefits than risk exposure.

Amihud et al. (2002) showed that the acquirer's beta would decrease as a result of a cross border merger in the context of the home banking portfolio.

Our result is consistent with their expectation but not consistent with their findings, which reports that there is no change in beta risk for bidders. Fields et al (2004) do not find any changes in variances of bidder stock prices or their betas, although they find low correlations between bank and insurer stock returns before mergers, which indicates a potential diversification effect.

<Insert Table 3 here>

5.2 Wealth effects

In this section, the paper breaks down stock returns into a systematic and a non-systematic return component to represent event-related return and market return. This paper considers the sources of systematic returns from three indices: the world market index, the home market index and the home banking index. The paper measures the wealth effect with cumulative abnormal returns using one of the following models to estimate the expected rate of return:

$$\hat{R}_{j,t} = \alpha_j + \alpha_{1j} D_t + \beta_{\text{world},j} RI_{\text{world},t} + \gamma_{\text{world},j} RI_{\text{world},t} D_t + \beta_{\text{home},j} RI^*_{\text{home},t} + \gamma_{\text{home},j} RI^*_{\text{home},t} D_t + \beta_{\text{homebanking},j} RI^*_{\text{homebanking},t} + \gamma_{\text{homebanking},j} RI^*_{\text{homebanking},t} D_t + \mu_{j,t}, \quad (5)$$

Considering correlations among the indices, $RI^*_{\text{home},t}$ is orthogonalized to $RI_{\text{world},t}$, and $RI^*_{\text{homebanking},t}$ is also orthogonalized to $RI_{\text{world},t}$ and $RI_{\text{home},t}$. We ran a linear regression of $RI_{\text{home},t}$ on $RI_{\text{world},t}$ and $RI_{\text{homebanking},t}$ on $RI_{\text{world},t}$ and $RI^*_{\text{home},t}$ and the regression residual is denoted as $RI^*_{\text{home},t}$ and $RI^*_{\text{homebanking},t}$.

Similar to study by Amihud et al (2002), in this study, the model is estimated over days -260 to -10 before the announcement day. Then the abnormal return for stock j on day t, $AR_{j,t}$ can be written as:

$$AR_{j,t} = R_{j,t} - \hat{R}_{j,t} \quad (6)$$

This paper then calculates the daily average abnormal returns (AARs) over the period -10 days to +10 days surrounding the announcement using the standard procedure. We computed the AARs for the whole sample and sub-samples depending on whether the deals are domestic or cross-border.

Finally, the paper computes several different event-windows' cumulative abnormal return by summing up the relevant abnormal returns, to account for possible leakages of information. Table 5 reported the short term wealth effects for bidder firms surrounding the announcement date.

$$CAR = \sum_{t=-n}^{+m} AR_{j,t} \quad (7)$$

Table 4 Panel A shows the AARs from 10 days before announcement to 10 days after the announcement. There is a significant negative AAR at six-days before merger announcement for the entire sample and it is driven mainly by domestic deals.

Domestic deals have a significant negative AAR on day two and a significant positive AAR on the third day after the merger announcement; while cross-border deals have a significant negative return on day one after announcement. For the whole sample, AAR is significantly negative on day two after announcement. Cumulative Abnormal Returns (CARs) of some typical event-study windows are shown in Panel B of Table 4 as well. Both the entire sample and the domestic deals report significant negative CARs for two event windows, day -1 to 2 and day 0 to 2, while cross-border deals have a significantly negative CAR for window day 0 to 1. The results of the event study indicate that in the short-term there is a negative market reaction towards those bancassurance deals, especially for domestic deals.

Some possible explanations for the significantly negative CARs and other empirical research are discussed below. It is possible that it takes some time for the investors to better appreciate the impact of the transaction on the profitability of the buyer. As stated by Houston et al (2001), it is possible that the disappointment shown in the fact that the bidding institution would have less chance of being acquired in the future is reflected in the negative announcement of the bidding financial institution.

Houston et al (2001) found that the premium paid for the target is less than the estimated gains associated with a merger. They argued that one should not rule out the possibility that often acquiring bank managers are too optimistic in predicting the gains associated with their merger plan. On the other hand, Akhigbe and Madura (2001), using a market model, find that ARs are positive and statistically significant for rival insurance companies. Computing symmetric cumulative abnormal returns, Cybo-Ottone and Murgia (2000) reported that they observed a positive CAR for a diversified merger. However, they find a negative market reaction in the case of M&A by a bidding bank.

In other bank mergers event studies, Zhang (1995) reported that the weighted average CAR for the window of (-2, +2) is 7%, Pilloff (1996) reported a mean value weighted CAR of 1.44% for the eleven days (-10, 0), and Houston and Ryngaert (1994) show a

mean value weighted CAR of 0.4% for five days (-4, 0). Fields et al. (2004) report strong evidence that both bidder and targets experience positive event data abnormal returns, and the abnormal returns are mainly derived from acquisitions involving public targets.

To estimate the bidders' long term wealth effect, we then estimate the following three-factor model of the bank acquirer returns over the period (-260, -10) before the announcement date and period (+10, +260) after the effective date of the deal. The results are reported in Panel C of Table 4, and one year after the deal becomes effective, although the entire sample and the two sub-sample CARs are all positive, none of them is significant.

<Insert Table 4 here>

5.3 Determinants of Wealth effects

In this section, we try to use some variables[2] to explain those negative CARs which we observed in Table 4. Since there is a significant decrease in systematic risk associated with the home banking index, the change in systematic risk on the home banking index is included as one variable. The regression equation is as follows,

$$\begin{aligned} CAR_j = {} & \alpha_0 + \alpha_1 \Delta\beta_{\text{homebanking},j} \\ & + \alpha_2 D_{Cross-board,j} + \alpha_3 D_{Control,j} \\ & + \alpha_3 \log(\text{firm size}_j) + \alpha_4 (\text{relative deal size}_j) + \varepsilon_j, \end{aligned} \tag{8}$$

where CAR_j is the short-term cumulative abnormal return for stock j over the event-widow (0, 2); $\Delta\beta_{\text{homebanking},j}$ is the change of systematic risk on the acquirer's home banking index for stock j; $D_{Cross-board,j}$, is a dummy variable, equal to one if the deal is

[2] It should be noted that one of the factors that could be relevant to market reaction is the way the payment is processed, as explained by DeLong (2001). By referring to a few researchers, DeLong (2001) clarified that often when bidders pay cash for acquisitions they could earn more than those paying stocks. It is argued that one reason for this is because bidders would pay using stocks if they know that their stock is overvalued. In any case in this study, there are only 4 deals in which 100% of the payment was made with stocks, we do not include payment method as a variable in our analysis.

cross-border, and equal to zero if the deal is domestic; $D_{Control,j}$ is a dummy variable, equal to one if the deal results in the bank gaining definite control over the target insurance company (increasing the ownership from lower than 50% to more than 50%), equal to zero otherwise. The results of the regression are reported in Table 5.

One would expect that the acquiring bank's expected rate of return decreases, when risk, more specifically systematic risk, decreases. In this case, since the bank's cash flows remain unchanged, one would expect to see its value increase. Thus, in the shorter term, one would expect to see some positive CARs in Table 4. On the other hand, when risk, more specifically systematic risk, increases one would expect to see an increase in the expected rate of return of the acquiring bank. In this case, one would expect to see the bank's value decrease, if the bank's cash flows remain unchanged. In this case, one could expect some negative CARs. It should be noted that an increase in risk will lead to an increase in stockholders wealth at the expense of debt holders and vice versa. In other words, there will be a transfer of wealth from one group to another subject to the type of risk. For instance, the systematic risk declines after a bank merges with an insurance company. The debt holders are better protected as the assets of the two previously separated firms support the debt. The debt holders increase their wealth as the debt of a merged firm is less risky. But the shareholders' wealth is not increased, because shareholders now have to guarantee each others' debt)

Our result reports that the bidder's change of beta is significantly positively related to CARs and is consistent with the expectation. Fields et al. (2004) found that the bidder's beta change is significantly negatively related to its abnormal return for deals involving public targets. A possible explanation can be that synergy is more likely to be created and managers are less likely to overpay for the targets when the targets are public firms.

Another significant factor is relative deal size; the larger the deal size relative to the bidder bank's market value, the more synergy is created. Our result is consistent with Asquith et al (1983) that there is a positive relationship between the relative size of the target firm's equity and the bidding firms' cumulative excess return.

In our result, the cross-border dummy is not significantly related to short-term effects. This is not consistent with Fields et al (2004). This is because our study is on European banking and most targets are located in Europe; while Fields et al (2004) examine a mix of U.S. and non-U.S. mergers. Cybo-Ottone and Murgia (2000) found that the dummy for domestic deals was significantly positively related to value-weighted abnormal returns in their European banking mergers study. It should be noted that *domestic* banks mergers incur lower incorporating costs compared to cross border deals.

<Insert Table 5 here>

6. Conclusion

This paper is the first comprehensive study of the risk and wealth effects of mergers and acquisitions between banks and insurance companies on the acquiring European banks. While there have been a number of studies dealing with M&A in banking, lack of data has prevented previous researchers from fully analysing the effects of M&A between banks and insurance companies, particularly with a focus on Europe. The evolution of the financial services industry including its deregulation in many parts of the world as well as more data about banks and insurance companies operation has provided an opportunity to study M&A between banks and insurance companies in Europe.

The empirical results indicate that, in relation to the home banking indices, acquirers experience a reduction in systematic risk while their total risk remains relatively constant. Acquiring banks also experience negative and statistically significant short term abnormal returns.

We also observe that the reduction in beta risk is associated with a negative abnormal return for the home banking index. The empirical results also show that in the long run,

there is no abnormal return associated with Mergers and Acquisitions. The empirical results also demonstrate that due to high leverage in banks, there is a transfer of wealth from stockholders to debt holders due to a reduction in beta risk. Finally, one can also note that greater synergy can be generated, when the size of the deal is large relative to the bidder's market value.

Our result is consistent with a study on cross border bank mergers by Amihud et al. (2002) that there is no effect on the bidders' total risk. Fields et al (2004) do not find any changes in variances of bidder stock prices or their betas, although they find low correlations between bank and insurer stock returns before mergers, which indicates a potential diversification effect. We expected a weaker covariance between the bidders' return and that of their home banking indices after mergers, as bidder firms' revenues have been combined with domestic banking income and insurance income from overseas. Meeting our expectation, this paper finds a decrease in bidders' beta risk relative to their home banking index for cross-border deals and the entire sample.

Given these empirical results, one could argue that the growth of Bancassurance mergers appears to have minimal effect on the systematic risk of the European banking system. However, it is evident that the market penalises the bidder banks which overpay for the targets. M&A between banks and insurers results in transferring shareholders wealth to debt holders (tax payers and policy makers as well). At the same time, one can also observe that cross border deals between banks and insurance companies would be more beneficial, the more geographically diversified these financial institutions are**.**

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Table 1: Bancassurance, mergers and acquisitions between European banks and insurance companies, 1986-2004
Panel A: National identities

Country	Acquirers	Targets
Belgium	1	1
Bulgaria	0	1
Cyprus	1	1
Denmark	1	2
Estonia	1	1
France	3	2
Germany	2	1
Hong Kong	0	1
Hungary	0	1
Iceland	1	1
Ireland-Rep	1	2
Italy	5	6
Morocco	0	1
Netherlands	2	0
Poland	2	3
Portugal	4	3
Spain	0	2
Sweden	4	3
Switzerland	2	1
Turkey	1	1
United Kingdom	11	8
Total	42	42

Panel B: Number of mergers per year

Year	Number of deals
1986	1
1989	1
1991	3
1992	2
1993	3
1994	3
1995	3
1996	2
1997	2
1998	2
1999	6
2000	6
2001	4
2003	2
2004	2
Total	42

The sample consists of mergers where the acquirer is a bank in Europe and the target is an insurance company. The acquirer owns at least 20% of the target after the acquisition, and the acquirer lists on a stock exchange for which daily return data are available. The merger is announced between 1980 and 2004.

Data sources: Thomson Financial Securities Data Worldwide Mergers, Acquisitions & Alliances Databases

Table 2: Change in total risk

	ΔTRR (world market index)			ΔTRR (home market index)			ΔTRR (home banking index)		
	Mean *t-statistics*	Median	% positive *t-statistics*	Mean *t-statistics*	Median	% positive *t-statistics*	Mean *t-statistics*	Median	% positive *t-statistics*
Entire sample (42)	0.3593	-0.4603	42.86	-0.5910	-0.1500	45.24	0.2671	-0.1333	40.48
	0.40		*-0.92*	*-1.43*		*-0.61*	*1.00*		*-1.24*
Domestic deals (31)	0.5804	-0.4259	41.94	-0.6660	-0.2074	45.16	0.4878	-0.0347	48.39
	0.49		*-0.90*	*-1.23*		*-0.53*	*1.42*		*-0.18*
Cross-board deals (11)	-0.2640	-0.8713	45.45	-0.3800	-0.0926	45.45	-0.3550	-0.1483	18.18
	-0.39		*-0.29*	*-0.88*		*-0.29*	*-1.43*		*-2.61***

Change in the acquiring bank's variance of daily stock return relative to the variance of three indices: world market index, acquirer home market index and acquirer home banking index. $TRR_{j,k}$ = total relative risk of acquirer $j = \frac{Var(R_j)}{Var(RIndex_k)}$. R_j is the daily stock return on acquirer j and $RIndex_k$ is the return on index k, where $k =$ world market, acquirer home market, and acquirer home banking. $\Delta TRR_{j,k} = TRR_{j,k}(\text{after}) - TRR_{j,k}(\text{before})$, where "before" is days -260 to -10 before the merger announcement, and "after" is days +10 to +260 after the merger becomes effective. The t-statistics test the hypothesis that $\Delta TRR_{j,k} = 0$, and the proportion of $\Delta TRR_{j,k} > 0$ is 0.5.

*, ** represent 10 percent and 5 percent significant levels, respectively.

Table 3: Change in systematic risk

	Δβ (world market index)			Δβ (home market index)			Δβ (home banking index)		
	Mean *t-statistics*	Median	% positive *t-statistics*	Mean *t-statistics*	Median	% positive *t-statistics*	Mean *t-statistics*	Median	% positive *t-statistics*
Entire sample (42)	-0.0170	0.0073	52.38	0.0528	0.0192	52.38	-0.1390	-0.1120	38.10
	-0.36		*0.31*	*0.84*		*0.31*	*-2.31***		*-1.57*
Domestic deals (31)	-0.0270	-0.0160	48.39	0.0651	0.0362	58.06	-0.1250	-0.0601	41.94
	-0.48		*-0.18*	*0.89*		*0.90*	*-1.61*		*-0.90*
Cross-board deals (11)	0.0114	0.0633	63.64	0.0180	-0.0402	36.36	-0.1780	-0.1828	27.27
	0.13		*0.90*	*0.14*		*-0.9*	*-2.32***		*-1.61*

Table 3 reports the change in beta coefficient of the acquirer's return after the merger compared to beforehand. $R_{j,t} = \alpha_j + \alpha_{1j} D_t + \beta_{\text{world},j} RI_{\text{world},t} + \gamma_{\text{world},j} RI_{\text{world},t} D_t + \beta_{\text{home},j} RI^*_{\text{home},t} + \gamma_{\text{home},j} RI^*_{\text{home},t} D_t + \beta_{\text{homebanking},j} RI^*_{\text{homebanking},t} + \gamma_{\text{homebanking},j} RI^*_{\text{homebanking},t} D_t + \mu_{j,t}$ is used. $R_{j,t}$ is the return on acquirer j on day t, $RI_{\text{world},t}$ is the world market index return on day t, $RI^*_{\text{home},t}$ is the residuals from a regression of the respective acquirer home market index return on $RI_{\text{world},t}$. $RI^*_{\text{homebanking},t}$ is the residuals from a regression of the respective acquirer home banking index return on $RI_{\text{world},t}$ and $RI^*_{\text{home},t}$. D_t is a dummy variable that is zero for days -260 to day -10 before the merger announcement, and one for day +10 to day +260 after the completion of the merger. $\Delta\beta_{k,j} = \gamma_{k,j}$.

*, ** represent 10 percent and 5 percent significant levels, respectively.

Table 4: Wealth effect

Panel A: Average abnormal return over -10 days to +10 days surrounding the announcement date

	Entire sample		Domestic deals		Cross-board deals	
	AAR (%)	*t-statistics*	AAR (%)	*t-statistics*	AAR (%)	*t-statistics*
Day -10	0.64	*2.41***	0.79	*2.58***	0.23	*0.43*
Day -9	0.07	*0.25*	-0.10	*-0.33*	0.53	*0.97*
Day -8	0.12	*0.44*	-0.02	*-0.05*	0.49	*0.90*
Day -7	-0.13	*-0.47*	-0.06	*-0.20*	-0.31	*-0.56*
Day -6	-0.53	*-1.95**	-0.82	*-2.65***	0.29	*0.53*
Day -5	0.27	*1.01*	0.33	*1.07*	0.11	*0.20*
Day -4	0.14	*0.52*	0.25	*0.83*	-0.18	*-0.34*
Day -3	-0.23	*-0.86*	-0.36	*-1.17*	0.13	*0.23*
Day -2	0.00	*0.02*	0.21	*0.67*	-0.57	*-1.03*
Day -1	0.27	*0.98*	0.05	*0.15*	0.88	*1.62*
Day 0	0.21	*0.8*	0.38	*1.24*	-0.26	*-0.47*
Day 1	-0.33	*-1.24*	-0.08	*-0.25*	-1.06	*-1.93**
Day 2	-1.11	*-3.97***	-1.73	*-5.33***	0.66	*1.20*
Day 3	0.42	*1.56*	0.73	*2.4***	-0.48	*-0.87*
Day 4	0.11	*0.42*	0.14	*0.47*	0.03	*0.05*
Day 5	0.31	*1.14*	0.38	*1.25*	0.09	*0.16*
Day 6	0.23	*0.85*	0.06	*0.21*	0.68	*1.25*
Day 7	-0.12	*-0.43*	0.05	*0.18*	-0.59	*-1.08*
Day 8	0.32	*1.21*	0.46	*1.51*	-0.07	*-0.12*
Day 9	0.28	*1.05*	0.31	*1.00*	0.21	*0.38*
Day 10	0.13	*0.49*	0.27	*0.89*	-0.27	*-0.49*

Panel B: Cumulative abnormal return surrounding the announcement date

	Entire sample		Domestic deals		Cross-board deals	
	CAR (%)	*t-statistics*	CAR (%)	*t-statistics*	CAR (%)	*t-statistics*
Day -10 to 2	-0.60	*-0.62*	-1.15	*-1.04*	0.95	*0.48*
Day -1 to 2	-0.96	*-1.77**	-1.38	*-2.21***	0.23	*0.21*
Day 0 to 1	-0.12	*-0.31*	0.31	*0.71*	-1.31	*-1.7**
Day 0 to 2	-1.23	*-2.6***	-1.43	*-2.63***	-0.66	*-0.70*
Day 0 to 3	-0.81	*-1.49*	-0.69	*-1.11*	-1.13	*-1.04*

Panel C: Cumulative abnormal return one year after the bancassurance becomes effective

	Entire sample		Domestic deals		Cross-board deals	
	CAR (%)	*t-statistics*	CAR (%)	*t-statistics*	CAR (%)	*t-statistics*
Day +11 to +260	3.83	*0.91*	2.29	*0.47*	8.16	*0.95*

Table 4 reports the average abnormal returns (AAR) and cumulative abnormal returns (CAR) surrounding the merger announcement, and cumulative abnormal returns (CAR) one year after the merger effective date. $R_{j,t} = \alpha_j + \beta_{\text{world},j} RI_{\text{world},t} + \beta_{\text{home},j} RI^*_{\text{home},t} + \beta_{\text{homebanking},j} RI^*_{\text{homebanking},t} + \mu_{j,t}$ is used to estimate the expected return, and the estimate-window is (-260, -11) before the announcement date. $R_{j,t}$ is the return on acquirer j on day t, $RI_{\text{world},t}$ is the world market index return on day t, $RI^*_{\text{home},t}$ is the residuals from a regression of the respective acquirer home market index return on $RI_{\text{world},t}$. $RI^*_{\text{homebanking},t}$ is the residuals from a regression of the respective acquirer home banking index return on $RI_{\text{world},t}$ and $RI^*_{\text{home},t}$. Panel A reports AAR 10-day surrounding the announcement date. Panel B reports CAR surrounding the announcement date. Panel C reports CAR one year after the merger effective date.

*, ** represent 10 percent and 5 percent significant levels, respectively.

Table 5: Determinants of short-term wealth effect

Variable	(1)	(2)
Adj-Rsquare	0.427	0.402
Constant	-0.0599	-0.0628
t-statistics	*-1.64*	*-1.51*
Δβ3	0.1481	0.1480
t-statistics	*2.19***	*2.14***
cross-board dummy	0.05483	0.0553
t-statistics	*1.51*	*1.39*
control dummy		0.002392
t-statistics		*0.10*
log (firm size)	0.005065	0.00519
t-statistics	*1.11*	*1.17*
relative deal size	0.034311	0.034336
t-statistics	*2.08***	*2.01**

Table 5 reports the regression of CAR on changes of systematic risk and other variables.

*, ** represent 10 percent and 5 percent significant levels, respectively.